

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

RAYBAUD, Hélène  
INTELLECTUAL PROPERTY LAW DEPARTMENT  
Schlumberger Riboud Product Centre  
1, rue Becquerel  
BP 202  
92142 Clamart Cedex  
FRANCE

PCT

## WRITTEN OPINION

(PCT Rule 66)

11 Feb 05 (D)

Date of mailing  
(day/month/year)

11.11.2004

Applicant's or agent's file reference  
WO 21.1053

REPLY DUE

within 3 month(s)  
from the above date of mailingInternational application No.  
PCT/EP 03/13305International filing date (day/month/year)  
26.11.2003Priority date (day/month/year)  
12.12.2002International Patent Classification (IPC) or both national classification and IPC  
E21B43/38Applicant  
SERVICES PETROLIERS SCHLUMBERGER et al.1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 12.04.2005

Name and mailing address of the international preliminary examining authority:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Bellingacci, F

Formalities officer (incl. extension of time limits)  
Kermani, N  
Telephone No. +49 89 2399-7740



## WRITTEN OPINION

International application No. PCT/EP 03/13305

## I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

## Description, Pages

1-11 as originally filed

## Claims, Numbers

1-16 as originally filed

## Drawings, Sheets

1/5-5/5 received on 12.10.2004 with letter of 12.10.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-5, 8-13, 15-16 no; 6,7,14 yes
Inventive step (IS)	Claims	1-16 no
Industrial applicability (IA)	Claims	1-16 yes

**2. Citations and explanations****see separate sheet**

Reference is made to the following documents:

D1 = US 5 873 410 A

D2 = US 6 213 208 A

**V - Reasoned statement under Rule 66.2 (a)(ii)**

V-1 D1, which is considered as the closest prior art, describes a well for producing oil from an underground formation, comprising:

- a first zone (between packers 20 and 26 in fig. 1) extending through the underground formation (14) containing oil and into which formation fluids including oil are allowed to flow;
- a second zone (40) extending away from the first zone and into which fluids from the first zone can pass (col. 3, lines 65 - col. 4, line 5);
- a third zone into (58) which water passes extending away from the first zone;
- a first valve (24, col. 3, lines 4-7) located in the well between the first zone and the second and third zones, operable so as to allow formation fluid to pass into the second zone (col. 3, line 65 - col. 4, line 5), and to prevent fluids from the second and/or third zones from passing into the first zone (col. 4, lines 26-30); and
- a second valve (60) located in the well operable to allow water to pass into the third zone (col. 3, lines 45-48), and to prevent flow of water from the third zone into the first and/or second zones (col. 4, lines 17-21).

The subject-matter of claim 1 is therefore not new and the claim does not meet the corresponding requirement of Art. 33(2) PCT.

V-2 Claim 2 is unclear, as it is not apparent:

- a) whether the second and third zones should be "defined" by the same or by different "vertical section"(s);
- b) whether the expression "part of which" expresses the requirement that at least one of the zones has to extend to the surface or the requirement that part of each of the zones should extend to the surface.

The claim does not meet therefore the clarity requirement of Art. 6 PCT.

Furthermore, embodiments which can be seen as falling into the scope of claim 2 are not new in the light of D1, as

- a) the "second zone" 40 of the embodiments of figures 1 and 2 of D1 extends via conduit 44 up to the surface (col. 3, lines 30-34, and see also col. 3, lines 7 - 10 which implies that section 40 alone extends up to 100 m from the surface), - b) the "third zone" 72 of the embodiment of fig. 2 of D1 extends up to the surface.

Claim 2, as far as it can be understood, does not meet therefore the novelty

requirement of Art. 33(3) PCT.

V-3 The subject-matter of claims 3 and 4 is also not clear, as it is not apparent how the second zone could comprise both a casing (cl. 3) and a production tubing (cl. 4) extending both to the surface.

The claims, as far as they can be understood, appear also to be not new in the light of casing 16 and tubing 44 of fig. 1 of D1. The subject-matter of claim 5 is not new in the light of D1, fig. 2 and col. 5, lines 15-20.

V-4 The subject-matter of claims 6 to 7 is new, but is considered as representing obvious alternatives to the embodiments disclosed in D1, in the light of D2, abstract and fig. 2.

V-5 Claim 8 is no clear, as it is formulated as dependant from an apparatus claim even though it is directed to a method. It is therefore not clear whether the scope of the claim is directed to an object or to an activity.

As far as the claim can be understood it seems however to be not new in the light of the embodiment of Fig. 2 of 1, see preceding point V-1 and D1, col. 5, lines 30 to 50, which disclose how in a given step the separated oil and water back downwards.

V-6 The subject-matter of claims 9 to 13, 15 and 16 is also not new, see D1, cited passage, while the subject-matter of claim 14 represent an obvious possibility.

V-7 The following objections are also raised:

- a) The independent claims are not properly cast in the two part form, with those features which in combination are part of the prior art (D1) being placed in the preamble, contrary to the requirements of Rule 6.3(b) PCT.
- b) The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- c) Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1 and D2 is not mentioned in the description, nor are said documents identified therein.